



Legco Members Panel on Environmental Affairs

30th June 2013

Dear Hon Cyd Ho and members of the Legco Panel on Environmental Affairs,

Recent letters to the local English press show the public has not been made fully aware that there are MSW/ waste treatment options which are not shown in the Government blueprint.

Contrary to the Govt mantra, there are indeed alternative waste handling options available – the conservative ENB just refuses to recognise these as if there is a massive penalty clause with AECOM if they chose not to proceed with the horrific dinosaur incineration project.

Numerous **peer reviewed scientific reports** show clearly that proximity to incineration sources causes increased birth defects, child and adult deaths and cancers versus locations not near such plants.

Therefore the proposed incinerators would also exacerbate cancers and deaths in Macau and Futian areas and further afield as the toxic cadmium, dioxin and furans suspended PM1 and PM2.5 particulates the baghouses cannot catch are taken by upper spatial transboundary air currents. Our seas would be poisoned as would the human food chain from the contamination of sea life and land animals.

The AECOM integrated waste management facility report listed the requirement of 3 incinerators in three phases. None is necessary.

ENB repeatedly states only Mass Burn Technology could handle our waste amounts, initially 3000 tpd; this is incorrect.

Two Solena Fuels gasification plants covering less area than one incineration plant can each handle 1,510 tonnes MSW per day per plant, there will be NO Residues of ash, the resultant bio jet fuel could be sold to local and international airlines to obtain carbon neutral credits for flying to Europe. Bio naphtha for plastic bottles can be produced or bio marine fuel as in Solena's venture with Maersk, the world's largest shipping line.

The first Solena Green Sky plant with British Airways in London will be operational in 2015.

<http://www.biofuelsdigest.com/bdigest/2012/12/03/british-airways-commits-us500m-to-greensky-london-plant/>

BA has commissioned a second plant for UK and two for Spain. A like plant is breaking ground in Gilroy USA to supply bio jet fuel to major US airlines. Agreements are in place with SAS for a Solena plant near Stockholm, another with Alitalia in Rome and one with Qantas in Australia. Maersk has allocated land in New Jersey for a plant to produce bio marine fuel from MSW. Banks bankroll the construction costs; the operators charge councils a gate fee per tonne of MSW and sell the resultant jet fuel.

http://www.kallman.com/shows/alt_aviation_fuels_berlin_2012/presentations/Solena%20Fuels%20Presentation.pdf

The World's largest current plasma gasifier reactor was already built, shipped and is being installed at Air Products plant in Teesside UK. This will be operational and handling 950 tpd MSW with effect from Q2 of 2014, just one year away. A plasma gasification plant can be up and running in 30 months. Plants are modular ; more waste add more modules.

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A second like gasification plant has been ordered from Air Products at Teesside and a 20 year electricity takeoff supply agreement is in place with HM Government's Cabinet Office. You cannot get a better example of Government trust in this technology which was obviously vetted.

<https://www.gov.uk/government/news/new-energy-deal-to-save-84m-from-government-bill>

<http://www.waste-management-world.com/articles/2013/04/plasma-gasification-waste-to-energy-air-products-teesside-uk-government.html>

Meanwhile smaller plasma gasification plants could be situated at existing Hong Kong landfills that already have EIAs in place and the landfills reverse-mined back to their original pristine state whilst generating power to heat local swimming pools and Government buildings.

<http://www.r3magazine.co.uk/2011/06/advanced-plasma-power-and-group-machiels-join-forces/>

Gasification is the BEST form of reducing non- recyclable construction waste to inert slag. Whilst the calorific values are low due to low carbonaceous content in construction waste, the residues are converted to vitreous lava like rock that can be crushed into construction aggregate thus saving costs of Govt projects and associated pollution from the barges used to import aggregate from China.

In the meantime our MSW could be exported to Europe as a commodity- yes indeed MSW is now a commodity in Europe. Even if we had to transport it the cost would be lower than handling it here and burning and disposing of it and building expensive man-made islands as the new ash lagoons. Why bury a commodity when you can sell it or give it away ?

Norway needs trash

http://www.nytimes.com/2013/04/30/world/europe/oslo-copes-with-shortage-of-garbage-it-turns-into-energy.html?_r=0

<http://www.mnn.com/lifestyle/recycling/blogs/norway-a-recycling-happy-nation-in-dire-need-of-trash>

Sweden needs trash

<http://newswatch.nationalgeographic.com/2013/01/04/sweden-needs-more-trash/>

Overcapacity of EC incineration plants and still building – need to import

<http://www.avfallsverige.se/fileadmin/uploads/Rapporter/F%C3%B6rbr%C3%A4nning/F2012-04.pdf>

http://www.iswa.org/uploads/tx_iswaknowledgebase/Berthoud.pdf

650 gasification plants in Europe by 2030

<http://www.europlasma.com/en/latest-news/176.html>

Kind Regards,

James Middleton

Chairman

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SCMP Comments dynamco Jun 30th 2013 10:48am

"little doubt Hong Kong needs a waste incinerator"

how wrong can you be!

www.scmp.com/comment/letters/article/1271395/incineration-key-managing-waste#comments

In fact there is zero doubt living downwind of incinerator PM1 /PM2.5 kills children + adults + causes birth defects +cancers. Read the reports.

Options are available:

Export MSW to Europe where there is a shortage + countries like Norway, Sweden, Germany and Netherlands need it since they have incineration overcapacity + strict recycling laws in place.

Our landfills could be recovered following the Belgium example.

www.r3magazine.co.uk/2011/06/advanced-plasma-power-and-group-machiels-join-forces/

Our MSW could be feedstock to be converted to bio jetfuel, bio marine fuel or bio naptha using the Fischer Tropsch process after gasification with No ASH residues.

Alternatively gasification technology could be used to generate electricity with No Ash residues + the generation sold to PRD.

Incineration (thermal conversion) of MSW in the presence of oxygen leaves 30% by weight as ash of which 7% is toxic fly ash - ash requires landfilling + treatment. Gasification in absence of oxygen renders MSW into molecular gaseous plasma (4th state of matter) components at the temperature of the sun; the residues are lava like rock that can be used as road aggregate since the ash is fused as vitreous lava + there are no residues to landfill. HKG currently imports all its construction aggregate with associated pollution.

South China Morning Post 南華早報

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[Home](#) > Letters to the Editor, June 30, 2013

Letters to the Editor, June 30, 2013 Sunday, 30 June, 2013, 12:00am

Comment > Letters

Incinerator site folly is sadly symptomatic

There is little doubt Hong Kong needs a waste incinerator, but huge advances could still be made in recycling.

For example, how about a government-led initiative to buy back plastic bottles, at a similar price to that paid for aluminium cans, thereby incentivising Hong Kong's amateur army of aluminium recyclers to also collect plastic? And if Swire Properties can put glass collection points on all their estates, why can't the government?

Sadly, Hong Kong lags far behind our Asian neighbours Taiwan, South Korea and Japan when it comes to household waste separation and recycling.

Given the need for a super-incinerator, it is the choice of location that is totally bewildering. Siting it on a remote island makes no sense at all; the experts all agree on this point.

It will take longer and cost more to build and to run than at alternative locations. Just the infrastructure required is stupefying: the building of a mini-town to house site workers.

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Experts agree the Tsang Tsui ash lagoons in Tuen Mun would make a far better location. Alternatively, adapting an existing landfill site would also be far more efficient.

The Environmental Protection Department's excuse for the choice of site, "balanced spatial distribution" of facilities, is absolutely laughable, or would be if it wasn't so tragic.

The saddest part of the whole farce is that the department's preferred site, Shek Kwu Chau island, is a pristine location, a stone's throw from Hong Kong's most beautiful unspoilt natural coastline.

This natural heritage is a treasure that should be protected for future generations - not ruined forever with an industrial facility that would make so much more sense in just about any other location.

Bert Young, Chai Wan

Source URL (retrieved on Jun 30th 2013, 10:48am):

<http://www.scmp.com/comment/letters/article/1271878/letters-editor-june-30-2013>

SCMP Online comment reply Jun 29th 2013 2:12pm

This scaremongering 'rubbish in the streets' article could have been drafted by the blinkered ENB rather than by an un-researched journalist.

The previous administration(s) failed to do anything to improve our air and waste problems.

The former ENB head was rewarded with a mayor's office manager job at 10x normal rates for his failures instead of a charge of Misconduct in Public Office; his failure to do his job meant innocent people died (Hedley Index).

Waste is a commodity in Europe where there is a massive shortage of MSW+ imports it to keep overcapacity incinerators operating. It can be exported instead of buried. In Belgium they are proceeding to reverse-mine 16m tonnes of MSW from a landfill using plasma gasification tech. If the world followed HK's conservative follow-the-leader approach we would never have seat belts nor crash helmets. Google 'Solena British Airways MSW Biofuel' 'world's largest Plasma gasifier Air Products Teesside'.

The current ENB inherited bad policy from the same backroom staff that achieved nothing during the former incumbent's tenure

When you inherit a bad policy you should discard it instead of continuing down the wrong road just to save the face of the incompetent designers.

Two Solena plants can handle 3100 tonnes MSW per day + produce carbon credit bio jetfuel with NO ASH. The ENB's grand plan of incineration = thermal conversion of MSW leaving 30% by weight ash + toxic fly ash that will need artificial islands as ash lagoons? Duhhh

Australia WA Govt EPD consultancy reports:

www.epa.wa.gov.au/EIA/EPAREports/Documents/WSP%20Waste%20to%20Energy%20Technical%20Report%20Stage%20One.pdf

www.epa.wa.gov.au/EIA/EPAREports/Documents/WSP%20Waste%20to%20Energy%20Technical%20Report%20Stage%20Two.pdf

Project: 31427 "**Many commentators consider gasification of waste to be unproven - they could not be more wrong. The Japanese have embraced gasification technologies for the processing of waste derived fuels, such as MSW, C&I, RDF and ASR**"

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Overview: Much of the interest around the world in waste gasification over the last fifteen years has originated with political decision makers seeking an alternative to incineration that achieved the following objectives, in order of political priority:

- ! produced demonstrably low emissions – particularly of dioxins;
- ! provided better resource recovery, in the form of materials and energy that could be re-used;
- ! is fully proven at commercial scale.

Over the last few years, the perception has arisen in Europe, Australia + parts of North America that gasification has failed against these objectives; principally because of the poor operational track record of gasification processes developed by smaller lowly capitalised companies.

Waste gasification technologies developed in Japan are proof that this is a misconception In WSP's view, the majority of the (gasification) processes operating in Japan deliver on each of those three key objectives."

<http://www.wspgroup.com/en/Welcome-to-WSP-UK/15458/>

SCMP Letters Comment reply dynamco Jun 29th 2013 9:00am

Naive!

www.ncbi.nlm.nih.gov/pubmed/23160082

Cancer mortality in towns in the vicinity of incinerators

CONCLUSIONS: Our results support the hypothesis of a statistically significant increase in the risk of dying from cancer in towns near incinerators + installations for the recovery or disposal of hazardous waste

www.gainscotland.org.uk/feature_Sint-Niklaas.shtml

Belgium

www.toxicswatch.org/2012/07/waste-to-energy-incinerators-create.html

www.ncbi.nlm.nih.gov/pubmed/16573187

Singapore

www.alternative-energy-news.info/negative-impacts-waste-to-energy/

www.slough.info/sain/sain02/sain02thompson04.html

www.heraldscotland.com/mobile/news/environment/cancer-fears-threaten-incinerator-plan.18210277?_ga=40e1cb2028cd0e9d896c25d22f83cbc57fe712ba

Scotland's newest burner closed

www.macaudailytimes.com.mo/macau/36605-cuhk-to-start-10-year-plan-on-ka-ho-residents%E2%80%99-health.html Macau

www.hpa.org.uk/NewsCentre/NationalPressReleases/2012PressReleases/120124Incineratorstatement/UK

www.ncbi.nlm.nih.gov/pmc/articles/PMC2074344/

www.ncbi.nlm.nih.gov/pubmed/15242064

Japan

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www.ncbi.nlm.nih.gov/pubmed/20581259

France

[www.thelancet.com/journals/lancet/article/PIIS0140-6736\(00\)02290-X/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(00)02290-X/fulltext)

www.greenpeace.org.uk/toxics/incinerators-double-childhood-cancer

www.guardian.co.uk/environment/2000/may/18/pollution.uknews

www.ncbi.nlm.nih.gov/pubmed/16410018

www.ncbi.nlm.nih.gov/pubmed/21420146/

www.ncbi.nlm.nih.gov/pubmed/23062831

www.ncbi.nlm.nih.gov/

South China Morning Post 南華早報

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[Home](#) > Incineration key to managing waste

Incineration key to managing waste

Saturday, 29 June, 2013, 12:00am

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I refer to your editorial ("[The rubbish of a waste policy](#) [1]", June 25), which described the sorry state we are in regarding our waste disposal system.

Hong Kong produces 9,000 tonnes of municipal solid waste a day. "Hong Kong Blueprint for Sustainable Use of Resources 2013-2022", published by the Environment Bureau, informs us that 52 per cent of this waste in Hong Kong is dumped in landfills, as against Taiwan's 2 per cent, Singapore's 1 per cent, and Japan's 0 per cent.

This shows us how backward we are in treating this waste compared to Asia's other advanced economies.

Why do they not dump their municipal solid waste in landfills? The difference is, they have incinerators. Taiwan treats 46 per cent of this waste by incineration, Singapore 51 per cent, and Japan 79 per cent. Hong Kong has 0 per cent incineration. Even worse is that the blueprint's target states that by 2022 we will incinerate just 23 per cent of our waste, while 22 per cent of our municipal solid waste will still be dumped in landfills.

If incinerators are such fearful things, emitting toxic gases, then we would have heard reports of deaths or illness among people living near them in Taiwan, Singapore and Japan.

Modern incinerators emit an insignificant amount of toxic gases.

They produce electricity which would help to reduce our electricity costs. They also enable nearby residents to enjoy free hot water, and they can heat up municipal swimming pools in winter.

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Why do our legislators not support incinerators? It is because they succumb to their voters' "NIMBY" ("Not In My Back Yard") attitudes. Our politicians are against expanding landfills, and they are against incinerators.

If nothing is done quickly, we will see streets full of refuse by 2018.

Our politicians like to engage in empty talk, such as saying the government should make waste reduction its primary policy. If they are serious about this, they should urge the government to impose a charge on waste immediately. Why the administration has to wait until 2016 to impose such charges is a mystery.

We are recycling 48 per cent of our waste, as against 52 per cent in Taiwan, 48 per cent in Singapore and 21 per cent in Japan, which is not bad. Of course, we should try to do more.

The real solution to our waste problem is to have at least 50 per cent incineration and the balance by recycling our waste. Would our politicians be brave enough to support this?

Alex Woo, Tsim Sha Tsui

Source URL (retrieved on Jun 29th 2013, 7:55am):

<http://www.scmp.com/comment/letters/article/1271395/incineration-key-managing-waste>